Francis M. Seely

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Web Portfolio: https://seelyfrank.github.io/webportfolio/

EDUCATION

Boston University, College of Computing and Data Sciences **Boston, MA**
Bachelor of Science in Data Science; Minor in Computer Science **Expected May 2026**

- 3.96 Major GPA | 3.70 Overall GPA
- **Relevant coursework:**
  Graduate Elective Courses: Applied Machine Learning, Natural Language Processing
  Standard Coursework: Algorithms and Data Structures, Database Engineering and Mechanics, Programming for Data Science, Statistics and Probability Theory

SKILLS

Proficient: Python (Pandas, NumPy, Scikit-learn, PyTorch), SQL, Java | **Familiar:** C, Rust, JavaScript, HTML, CSS, PowerBI
Tools: Excel, SQL Server, MySQL Workbench, Git, Jupyter, VSCode, PowerPoint
Other: Data Cleaning and Preprocessing Pipelines, Machine Learning, Deep Learning & AI, Algorithms, RESTful APIs, Unit Testing
Soft: Problem-solving, communication, cross-function team collaboration, reporting, presentations

DATA & ANALYTICS EXPERIENCE

Ethereum Transaction Fraud Detection (work in progress) **Feb 2025**

- Developed an automated Ethereum transaction reading system using Node.js, Alchemy & Ether RESTful APIs, and MySQL to fetch, process, and store one million transaction data in real time, enabling relevant anomaly analysis.
- Conducted an exploratory data analysis using SQL queries and Pandas on transactions and trained an Isolation Forest on engineered features to flag anomalies.
- Currently working on a PowerBI dashboard, integrated with machine learning and MySQL, that will report up-to-date trends on suspicious transactions.

Degree of Separation Simulator **May 2024**

- Developed a graph analysis tool to read various graph datasets, directed and undirected, and compute shortest paths using BFS (Breadth-First-Search).
- Used Stanford's extensive datasets, like email-Eu-core and epinions, to emulate real-world scenarios and confirm the connectivity of graph vertices.
- Employed Rust's performance benefits to handle large-scale graph data efficiently.

Airport Flight Delay Exploratory Data Analysis **Nov 2023**

- Utilized Python to explore and model a flight log dataset to determine which factors contribute to the highest chance of a flight delay.
- Discovered that flying Southwest Airlines in the evening leads to the highest chance of having a flight delay through EDA.

AWARDS

BU Civic Hackathon 2025: Best Technical Execution **Feb 2025**

- Developed a web application called Green Gauge in a group of four that provides users with tree coverage statistics and other relevant information regarding the "green score" of their surrounding environment.
- Leveraged OpenAI Visual and AirVisual APIs and the DeepForest neural classification model to acquire relevant data and process user recommendations to improve their local ecosystem.

Winner of the College of General Studies Capstone Policy Paper **Oct 2024**

- Collaborated in a team-oriented environment with six peers to create a 62-page policy proposal for harm reduction efforts in Newark, New Jersey, and gave a two-hour oral defense before three judges.

Dean's List | 4 terms

EXTRACURRICULAR EXPERIENCE

BU Artificial Intelligence Society **Jan 2025**
Provides a diverse space for students with a passion for machine learning and artificial intelligence news and applications. Host weekly lectures to share knowledge of common AI topics, such as creating tokenizers and training LLMs.

BU Blockchain Club **Nov 2023**
An inclusive community committed to advancing blockchain technology through research, development, and innovation. Hosts hackathons, workshops, and other collaborative events to promote the development of an empowering and motivated blockchain community.